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ABSTRACT

Several researchers have recently suggested, on limited data, that personality measures are more valid for individuals for whom inter-item variance is low. Questions remain concerning the robustness of the effect reported in these studies and whether general traitedness or traitedness within specific dimensions will moderate correlations other than self- and peer-ratings. A study was conducted to examine self-peer rating correlations, moderating effects on the correlation between adjective self-ratings and scores on scales from the California Psychological Inventory (CPI), and moderating effects on the correlation between adjective peer ratings and CPI scale scores. College students (N=81) provided self-reports and peer-ratings on seven scales built from adjectives sampling the trait-descriptive universe and scores on the same seven dimensions from the CPI. The results did not support the robustness of either general traitedness or traitedness for specific dimension in moderating the correspondence between self- and peer-ratings, self-ratings and inventory scores, or peer-ratings and inventory scores. Subjects scoring below the median of inter-item variance did not show greater correspondence among self-ratings, peer-ratings, and CPI scores, casting doubt on the pervasiveness of the moderating effect of intraindividual variance in item responding. (Author/NB)

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Moderating Effects of Intraindividual Variance

across the Trait Descriptive Universe

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Abstract

Several researchers have recently suggested, on limited data, that personality measures are more valid for individuals for whom inter-item variance is low. The present study obtained from 81 subjects self-reports and peer ratings on seven scales built from adjectives sampling the trait-descriptive universe and scores on the same seven dimensions from the California Psychological Inventory (CPI). Subjects scoring below the median of inter-item variance did not show greater correspondence among self-ratings, peer ratings, and CPI scores, casting doubt on the pervasiveness of the moderating effect of intraindividual variance in item responding.

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(1) Title of Paper: Moderating Effects of Intraindividual Variance  
Across the Trait Descriptive Universe

(2) Topical Session Preference: Personality Measurement

(3) Problem or Major Purpose:

Recently Amelang and Borkenau (1986) and Baumeister and Tice (1986) have elaborated on an earlier suggestion (Allport, 1937; Bem and Allen, 1974) that not all personality trait dimensions apply equally well to everyone. Both recent researchers report that a trait dimension may be most relevant for persons showing little variance in responses to individual items on a trait scale. For example, a trait may be more applicable for a person who responds "6" (on a scale from 1 to 9) to every item on a scale than for a person who divides responses equally among "4," "5," "6," "7," and "8." In both cases the average item response is 6, but the former case shows less intraindividual response variance (or, more intraindividual response consistency) than the latter case. Baumeister and Tice refer to the former type of person as "traited," and the latter, "untraited."

Amelang and Borkenau's position differs from Baumeister and Tice's in that the former researchers claim that traitedness is a general disposition that will moderate trait applicability across all dimensions, whereas Baumeister and Tice suggest that traitedness is specific to each trait under consideration. Amelang and Borkenau's (1986) claim is based on data showing that intraindividual response variance does not moderate self- versus peer ratings within specific trait dimensions; however, a general index of intraindividual response variance (the sum of variances across all scales) appears to moderate self-peer correspondence. For all six trait scales, the correlation between self- and peer

ratings was higher for traited than untraited persons. The differences reached statistical significance in three out of six cases.

Baumeister and Tice present no data on the effect of traitedness on self-peer correspondence, but do present evidence that intraindividual response variance on a specific trait dimension (locus of control in their study) can affect the relationship between trait scores and other behavior (practicing for a test and attributions of performance in their study).

The Amelang and Borkenau data appear to show directly and definitively that "general traitedness," but not "trait-specific traitedness," moderates the correspondence between self-ratings and peer ratings of personality. The present study seeks to replicate their findings while simultaneously addressing some questions left unanswered from their study.

One unanswered question concerns the robustness of the effect they appeared to find. Indeed, their correlations for traited persons were higher than for untraited persons for all six scales, but the differences were statistically significant in only half the cases. Furthermore, we have no indication that the scales used in the study (borrowed from the Bem and Allen study) are representative of the trait-descriptive universe. The present study tests whether general or trait-specific traitedness will moderate self-peer correlations in an additional sample of subjects on seven adjective scales that comprehensively sample the trait-descriptive universe.

The second unanswered question is whether general traitedness or traitedness within specific dimensions will moderate correlations other than self- and peer ratings. Therefore, in addition to (a) self-peer rating correlations, the present study also examines moderating effects on the correlation between (b)

adjective self-ratings and scores on scales from the California Psychological Inventory (CPI; Gough, 1975); and (c) adjective peer ratings and CPI scale scores. Examining the moderating effects of traitedness on peer ratings and CPI scores are particularly significant, because potential method contamination (using self-report adjectives to determine item variance and for self-description) is removed.

(4) Subjects:

Subjects were 64 undergraduate students enrolled in an introductory psychology course. Data from three students were incomplete, leaving 81 subjects. Subjects received extra credit for their participation.

(5) Procedure:

Measurement of Personality with the BARS. Subjects rated themselves on 49 7-point, Likert-scale adjective pairs. They also had three persons who knew them well rate them with the scales. These peer ratings were returned confidentially to the investigator to encourage honesty. Most of the 49 scales in this set of bipolar adjective rating scales (BARS) were derived from similar scales successfully used by Hogan and Johnson (1981). Normally, the 49 single-item scales are clustered into seven superordinate scales: Mentality, Power, Likeableness, Poise, Novelty, Sociability, and Conscientiousness. The superordinate scales assess the same dimensions measured by the primary scales of the Hogan Personality Inventory (HPI; Hogan, 1986): Intellectance, Ambition, Likability, Adjustment, Prudence, and Sociability. (Hogan's Prudence scale originally consisted of two separate scales: Ego Control, corresponding to Novelty--cf. Laufer, Johnson, & Hogan, 1981--and Prudence itself, corresponding to Conscientiousness. Ego Control, although intended to be conceptually unique,

appeared to be psychometrically identical to Prudence, leading Hogan to join the scales--cf. Johnson, 1983). The scales on the BARS were purposely given different names, not to confound the reader, but to distinguish them from the HPI scales.

Measurement of Personality with the CPI-HPI. Subjects also completed the California Psychological Inventory (CPI; Gough, 1975). The CPI can be scored to assess the same seven dimensions measured by the BARS and the HPI (see Hansson, Hogan, Johnson, & Schroeder, 1983; Hogan, Carpenter, Briggs, & Hansson, 1986; and Hogan & Johnson, 1981).

Analyses. Variances were computed for each of the seven self-report BARS scales. Subjects were classified as "traited" on an individual trait scale if they scored above the median variance on that scale, and "untraited" if they scored below the median. Variances were intercorrelated factor-analyzed by principle components to test for the presence of a general traitedness factor. Variances were summed, the median was determined, and subjects were classified as "generally traited" if above this median, and "generally untraited" if below.

Three sets of correlations were computed for the entire sample: BARS self-reports with BARS peer ratings, BARS self-reports with CPI-HPI scales, and BARS peer-ratings with CPI-HPI scales. Separate correlations were then computed for generally traited and generally untraited subjects, and for subjects traited and untraited on each of the seven dimensions. Correlations were converted to z-scores by Fisher's transformation, and the magnitude of difference between traited and untraited subjects was tested for statistical significance.

#### (6) Results of Findings

The average intraindividual variance correlation across the seven BARS scales (.20) was not nearly as substantial as the mean variance correlation reported by Amelang and Borkenau (1986)--.48. The principal components factor analysis did replicate Amelang and Borkenau's finding of a general traitedness factor, although the Sociality scale showed a substantial loading on a second factor. This justifies summing variances across the seven scales to form a general variance score to define general traitedness or untraitedness.

A comparison of correlations for traited versus nontraited individuals (both general and for specific scales) can be found in Table 1. For general traitedness, traited individuals had higher correlations than untraited individuals 11 out of 21 times. None of the differences reached statistical significance. The potential moderating effect of traitedness on specific dimensions showed that traited individuals had higher correlations 95 out of 147 times, but only four of these differences (3% of the 147 correlations) reached the .05 level of statistical significance.

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Insert Table 1 about here

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#### (7) Conclusions:

The present data do not support the robustness of either general traitedness or traitedness for specific dimension in moderating the correspondence between self- and peer ratings, self-ratings and inventory scores, or peer ratings and inventory scores. "Eyeballing" the data might give the mistaken impression that a moderating effect does exist, but statistical tests suggest the possible

effects are due to chance. The optimistic conclusions drawn by Amelang and Borkenau, based on six pairs of correlations, and by Baumeister and Tice, based on one experiment, may be premature.

The present data do not rule out the possibility that either general or specific traitedness exists, and that it has a moderating influence on the validity of personality measurement in certain circumstances. The study does suggest, however, that such moderating influences--defined by intraindividual variance--may not be as pervasive as other researchers have hoped.

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Table 1

Moderating Effects of Traitedness across the Trait-Descriptive Universe

Traitedness Moderating Variable											
Full Sample	General	MEN	POW	LIK	POS	NOV	SOC	CON			
	TR UT	TR UT	TR UT	TR UT	TR UT	TR UT	TR UT	TR UT	TR UT	TR UT	TR UT
<b>Self-Ratings/ Peer Ratings</b>											
MEN	47	48 47	47 50	56 38	60 29	50 39	53 44	49 46	49 47		
POW	53	58 51	55 53	74 30	58 49	61 46	51 55	68 40	61 48		
LIK	53	59 47	43 62	55 51	53 51	74 29	54 53	43 63	54 50		
POS	53	53 55	56 52	54 50	60 48	57 47	60 47	53 52	58 45		
NOV	44	51 39	43 44	41 43	61 27	42 49	42 44	57 31	47 37		
SOC	74	76 73	76 73	77 73	81 66	74 73	69 77	80 64	70 78		
CON	57	55 59	63 47	66 50	52 62	62 53	58 57	54 61	52 59		
<b>Self-Ratings/ CPI-HPI Scores</b>											
INT	38	53 29	41 32	50 26	47 35	50 29	47 32	52 23	53 23		
AMB	70	64 76	72 69	72 69	61 79	74 67	69 77	74 66	76 64		
LIK	51	54 39	24 66	61 43	62 36	56 43	60 41	51 51	43 61		
ADJ	66	53 72	54 74	69 64	62 71	76 45	60 70	54 70	65 64		
EGO	27	10 43	28 28	30 25	07 40	21 28	41 11	21 34	02 42		
SOC	72	79 64	74 69	73 72	73 68	79 65	76 70	74 65	75 68		
PRU	52	42 63	54 54	47 57	49 56	41 61	63 45	41 63	30 60		
<b>Peer Ratings/ CPI-HPI Scores</b>											
INT	54	54 56	53 58	65 40	58 52	45 59	59 50	53 56	57 51		
AMB	32	30 37	30 33	47 15	26 35	36 28	22 39	44 24	46 21		
LIK	40	43 38	26 52	21 53	47 31	36 39	50 28	27 51	41 35		
ADJ	37	27 46	32 42	32 42	34 40	39 32	38 35	29 41	36 37		
EGO	16	02 37	15 19	18 15	12 19	20 15	18 16	05 32	13 42		
SOC	67	73 61	61 74	70 64	74 58	74 59	62 72	75 54	67 66		
PRU	50	63 39	68 34	52 50	55 46	55 47	63 33	54 48	42 52		

Note. Total N = 81, rs greater than .19 are significant at at least the .05

level, greater than .26, at the .01 level (one-tailed). Ns for traited and untraieted subgroups are 40 or 41, varying across scales, rs greater than .27 are significant at at least the .05 level, greater than .37, at the .01 level (one-tailed). Decimal points are omitted from all correlation coefficients. Underlined pairs of correlation coefficients are significantly different at at least the .05 level, two-tailed. TR=Traited; UT=Untraieted. Abbreviations for corresponding BARS and CPI-HPI scales: MEN-INT (Mentality-Intellectance); POW-AMB (Power-Ambition); LIK-LIK (Likeableness-Likeability); POS-ADJ (Poise-Adjustment); NOV-EGO (Novelty-Ego Control); SOC-SOC (Sociality-Sociability); CON-PRU (Conscientiousness-Prudence).

<sup>a</sup>Novelty (NOV) scales scores reversed in sign to correspond to direction of scoring for Ego Control (EGO).